

# LAUNDERING PPE WITH CITROSQUEEZE®





# PPE CLEANING WITH CITROSQUEEZE®

## // *Commercial Laundering Guide*

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Thank you for choosing CitroSqueeze® PPE and Turnout Gear cleaner as your apparel detergent and gear cleaner of choice - we know there are many cleaning product options on the market, but we are confident that CitroSqueeze® offers the best and safest cleaning power available for a large range of soiled PPE situations. It's unique and simple cleaning process makes it easy to use, economical, and extremely versatile - experiment on your own specific needs and see if it works!

Since its beginnings some 2 decades ago in the municipal fire service cleaning soiled turnout gear for fire fighters exposed to soot, smoke, grease, oil and other hydrocarbons, CitroSqueeze® has cleaned over 2 millions PPE garments and counting - without one recorded incidence of damage to the items being cleaned.

### WASH INSTRUCTIONS

CitroSqueeze® PPE and Turnout Gear cleaner is a unique cleaning agent when compared to most commercial laundry detergents because it only requires one product to be introduced at the beginning of the wash process - no additional chemicals or sourers need to be added to counteract (neutralize) the detergent, saving on product and resources.

**Due to the unique chemical process by which CitroSqueeze® cleans hydrocarbon-based soiling and contamination from PPE apparel and equipment, failure to adhere to the wash instructions set out in this guide may result in less than ideal cleaning performance.**

#### FRONT LOADING WASHING MACHINE (EXTRACTOR)

We recommend the use of a stainless steel tub, front loading washing machine (preferably without agitator), designated specifically for cleaning PPE to avoid cross-contamination. Protective clothing (PPE) should always be washed by itself; do not overload the washing machine. Use no softeners, and NEVER use chlorine bleach.

Our recommended method for washing is to use warm water in the first wash cycle for approximately a 15 minute wash; water temperature should not exceed 105°F. Follow up with (3) three separate rinse cycles (5 min/each) in cold water. Always be sure to rinse thoroughly. **Please refer to the Wash Formulation Chart found on following pages for specific wash cycle instructions.**

**1-888-270-4237**

**[www.citrosqueeze.com](http://www.citrosqueeze.com)**

## DETERGENT DELIVERY

There are two methods for adding CitroSqueeze® PPE Cleaner to your extractor wash process - via an automatic pump delivery system, or a manual pour cup. Both methods have their merits - choose the one that best suits your facility, staff and washing process, or the one recommended to you by our technical team specific to your application:

### 1. AUTOMATIC PUMP (DOSING) SYSTEM\*

Automatic Dosing Pumps are common in commercial laundering operations, and can be used to deliver CitroSqueeze® to your extractor easily and efficiently. Simply program your extractor to request the correct amount of CitroSqueeze® to be injected for your wash load size at the appropriate time.

\* (Pump programming may require a visit from your extractor or pump technician depending on the model and age of your pump - please contact us should you need to source a new pump or require assistance with programming).

### 2. MANUAL POUR CUP & SPOUT METHOD

Wash the way Mom used to do it - just fill up a measuring cup with CitroSqueeze® and pour it in!

Dispense the correct amount of CitroSqueeze® for your current wash load into a measuring cup, pour the contents into your extractor manual feed port or pour it directly onto your load through the front door prior to starting the wash cycle.

Remember! Unlike most detergents, direct contact between CitroSqueeze® and your PPE apparel will not cause any damage to your PPE thanks to our near neutral pH composition.

HINT : CitroSqueeze® 5 gallon formats are available with an easy-to-use pour spout that can be attached to our containers for easy dispensing - see our online store or speak to your distributor for more information.



## COMMERCIAL/INDUSTRIAL EXTRACTOR WASH FORMULATIONS

To achieve maximum cleaning performance when using CitroSqueeze® PPE Cleaner to wash your PPE apparel, our experts have developed these general wash formulations (wash cycles) based on our own experiences as well as feedback from our network of clients, having collectively washing over 2 millions garments in the last 20 years.

### RECOMMENDED WASH CYCLE

Cycle Type	Duration or Content
Water Fill	WARM (Highest fill level, not to exceed 105°F.)
CitroSqueeze® Supply	<b>SEE SUPPLY CHART BELOW</b>
Wash Cycle	15 min
Drain	1 min
Low Spin	1 min
Water Fill	COLD (Highest fill level)
Rinse	5 min
Drain	1 min
Low Spin	1 min
Water Fill	COLD (Highest fill level)
Rinse	5 min
Drain	1 min
Low Spin	1 min
Water Fill	COLD (Highest fill level)
Rinse	6 min
Drain	1 min
Low Spin	4 min

### CITROSQUEEZE® SUPPLY

Extractor / Load Size*	CitroSqueeze® Amount per Load
35 - 45 lb.	6 oz.
50 - 60 lb.	8 oz.

\* the extractor size or load size refers to the physical weight (in lbs.) of the garments you are cleaning per wash load.

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# TURNOUT & PPE GEAR WASH PROCESS

## // *Lightly Soiled Gear*

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**BEFORE YOU START WASHING TURNOUT GEAR, MAKE SURE YOU WEAR PROTECTIVE EQUIPMENT INCLUDING: Apron, Gloves, and Glasses**

- First, check gear to see if spot cleaning is necessary.

If spot cleaning is necessary, a spot cleaning solution of 1 part CitroSqueeze® to 1 part water may be sprayed directly onto hard to clean areas (collars, cuffs, spots). Lightly scrub by hand or with a soft nylon bristle brush.

- Place gear in the extractor and run on the “Heavy” wash load setting with 6 to 8 ounces of CitroSqueeze® per load.
- After wash cycle is completed, inspect the gear for cleanliness. If the gear still needs cleaning, put gear into a soak tank consisting of 1 part CitroSqueeze® to 4 parts water, and soak for one hour.
- Once soaking is completed, re-wash turnout gear on “Heavy” wash load setting with 6 to 8 ounces of CitroSqueeze®.
- It is always important that the Extractor/Washer has at least 3 clear water rinse cycles to remove all left over chemical and debris. As with any cleaning agents, failure to properly rinse or use the proper pH level can significantly interfere with and alter the water repellency and performance of the outer shell.



# TURNOUT & PPE GEAR WASH PROCESS

## // *Medium Soiled Gear*

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### **BEFORE YOU START WASHING TURNOUT GEAR, MAKE SURE YOU WEAR PROTECTIVE EQUIPMENT INCLUDING: Apron, Gloves, and Glasses**

- Soak gear in main soak tank consisting of 1 part CitroSqueeze® to 4 parts water. Soak for one hour. If necessary, you may soak for longer period of time.
- After gear has soaked, remove gear from soak tank and check to see if spot cleaning is necessary. If spot cleaning is necessary, a spot cleaning solution of 1 part CitroSqueeze® to 1 part water may be sprayed directly onto hard to clean areas (collars, cuffs, spots). Lightly scrub by hand or with a soft nylon bristle brush.
- Place gear in the extractor and run on the “Heavy” wash load setting with 6 to 8 ounces of CitroSqueeze® per load.
- It is always important that the Extractor/Washer has at least 3 clear water rinse cycles to remove all left over chemical and debris. As with any cleaning agents, failure to properly rinse or use the proper pH level can significantly interfere with and alter the water repellency and performance of the outer shell.
- After wash is completed, be sure to inspect the gear for cleanliness. If gear still needs cleaning, repeat process with a longer soak time.



# TURNOUT & PPE GEAR WASH PROCESS

## // *Heavily Soiled Gear*

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### **BEFORE YOU START WASHING TURNOUT GEAR, MAKE SURE YOU WEAR PROTECTIVE EQUIPMENT INCLUDING: Apron, Gloves, and Glasses**

- Put the gear into the extractor and wash on the pre-wash setting to remove excess contaminants. This step removes excess contaminants from the turnout gear that would otherwise pollute your soak tank, allowing longer chemical life of your soak tank cleaner.
- Once pre-wash cycle is completed, soak gear in the main soak tank. Heavily soiled gear may require soaking in stronger ratios CitroSqueeze® and water than the Light and Medium soiled soaking process. If so, you may use 1 part CitroSqueeze® to 1 part water, or 1 part CitroSqueeze® to 2 parts water. Soak for one hour. If necessary, you may soak for longer period of time up to 72 hours to remove such contaminants as diesel fuel or tar.
- After gear has soaked, lightly scrub with a soft nylon bristle brush or by hand. Scrub using light to moderate pressure. Heavy, aggressive scrubbing should not be done as it may create excessive wear on gear. If additional spot cleaning is necessary, a spot cleaning solution of 1 part CitroSqueeze® to 1 part water may be sprayed directly onto hard to clean areas (collars, cuffs, spots). Lightly scrub by hand or with a soft nylon bristle brush.
- Place gear in the extractor and run on the “Heavy” wash load setting with 6 to 8 ounces of CitroSqueeze® per load.
- It is always important that the Extractor/Washer has at least 3 clear water rinse cycles to remove all left over chemical and debris. As with any cleaning agents, failure to properly rinse or use the proper pH level can significantly interfere with and alter the water repellency and performance of the outer shell.
- After wash is completed, be sure to inspect the gear for cleanliness. If gear still needs cleaning, repeat process with a longer soak time.



# SOP for Advanced Cleaning

*// Assisting Compliance to NFPA 1851*

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**BEFORE YOU START WASHING TURNOUT GEAR, MAKE SURE YOU WEAR PROTECTIVE EQUIPMENT INCLUDING: Apron, Gloves, and Glasses**

## **STRUCTURAL OUTERSHELL**

1. Separate layers of Garment Ensemble/Remove DRD if possible
2. Spot treat heavy soiled areas with approved spotters (such as CitroSqueeze)
3. Close all closures on coat and pants (outershell)
4. Load machine to the capacity recommended by machine manufacture
5. Use a mild detergent with a pH level from 6.0 to 10.5 such as CitroSqueeze® (look for documentation on detergent that it has been tested for turnouts)
6. Wash with machines that have an extract speed of less than 100g force if possible.
7. If the machine has programmable cycles then wash on the appropriate cycle for the element being washed (outershell vs. liner)
8. Remove gear from machine and inspect and rewash if needed.



# SOP for Advanced Cleaning

*// Assisting Compliance to NFPA 1851*

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**BEFORE YOU START WASHING TURNOUT GEAR, MAKE SURE YOU WEAR PROTECTIVE EQUIPMENT INCLUDING: Apron, Gloves, and Glasses**

## **STRUCTURAL AND PROXIMITY GEAR LINER**

1. Separate layers of Garment Ensemble (should have already been done)
2. Spot treat heavy soiled areas with approved spotters (such as CitroSqueeze)
3. Turn Liner inside out ...close all closures on coat and pants (if possible)
4. Load machine to the capacity recommended by machine manufacture
5. Use a mild detergent with a pH level from 6.0 to 10.5 Such as CitroSqueeze® (look for documentation on detergent that it has been tested for turnouts)
6. Wash with machines that have an extract speed of less than 100g force if possible.
7. If the machine has programmable cycles then wash on the appropriate cycle for the element being washed (outershell vs. liner)
8. Remove gear from machine and inspect and rewash if needed. Note water temp shall not exceed 105 degrees F.